

Defense Information Infrastructure (DII)

Common Operating Environment (COE)

Version 3.0

**Consolidated Version Description Document for
Windows NT 3.5.1**

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Prepared for:

Defense Information Systems Agency

Table of Contents

Forward	iii
Part 1. Version Description for the Kernel (Windows NT 3.51) Version 3.0.0.5	1
1. System Overview	1
2. Referenced Documents	1
3. Version Description	2
3.1 Inventory of Materials Released	2
3.2 Software Changes	2
4. Installation Instructions	2
5. Known Problems and Errors	2
6. Release Notes	3
Attachment 1 - DII COE Kernel Version 3.0.0.5 (Windows NT 3.51) Software Changes	5
Attachment 2 - DII COE Kernel Version 3.0.0.5 (Windows NT 3.51) Known Problems and Errors	6
Part 2. Version Description for the Developer's Toolkit (Windows NT 3.51) Version 3.0.0.5 .	7
1. System Overview	7
2. Referenced Documents	8
3. Version Description	8
3.1 Inventory of Materials Released	8
3.2 Software Changes	9
4. Installation Instructions	9
5. Known Problems and Errors	9
6. Release Notes	9
Attachment 1 - DII COE Developer's Toolkit Version 3.0.0.5 (Windows NT 3.51) Known Problems and Errors	12
Part 3. Version Description for the MS Office Version 1.0.0.0/4.2c (MS-Windows NT 3.51)	15
1. System Overview	15
2. Version Description	15
2.1 Inventory of Materials Released	15
3. Installation Instructions	15
4. Known Problems and Errors	15
5. Release Notes	15

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Forward

Version Descriptions available for the Defense Information Infrastructure (DII) Common Operating Environment (COE) Commercial-Off-The-Shelf (COTS) products do not appear in this release of the DII COE Consolidated Version Description Document. Contact the Defense Information Systems Agency (DISA) for information concerning the licensed software and supporting documentation.

NOTE: Contact DISA's Configuration Management for the available documentation on the DII COE COTS applications.

The DII COE Consolidated Version Description Document is part of a set of DII COE developer documentation published in conjunction with major or general releases of the DII COE (such as DII COE Version 3.0). It contains the latest information available on the date of release of this publication.

Segment Availability: Not all DII COE segments described in this document may be available in the referenced release of the DII COE. The information contained herein may precede the availability of certain DII COE software segments. Please visit the DISA's DII COE Home Page on the World Wide Web to obtain the most current information available and to obtain the latest available release of DII COE software segments and other related documentation required by your organization.

DISA DII COE Home Page URL: <http://www.disa.mil/dii/diicoe> or
<http://204.34.175.79/dii/>

Segment Documentation Applicability: Software segments included in this document are identified by their DII COE segment release version number and/or product version number, as available. It is important to note, however, that documentation released with a given segment version may be applicable to subsequent version(s) of the same software segment. For example, the installation guide for a DII segment version 3.0.0.3 may also apply to version 3.0.0.4 of the same segment unless superseded by a new release of the documentation. Refer to the details provided in the Version Description Document (VDD) for a particular segment release and its related amendments or errata to obtain the most current information on the fixes incorporated, additional sources of information, or reference documents.

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Part 1. Version Description for the Kernel (Windows NT 3.51) Version 3.0.0.5

NOTE: Courier font is used to indicate entries to be typed at the keyboard, Windows NT commands, file and directory names, and screen text. For example:

The file is located in the `DII_DEV` directory.

1. System Overview

The Defense Information Infrastructure (DII) Common Operating Environment (COE) will normally make available a large number of segments, not all of which are required for every application. The COE *kernel* is the minimum set of software required on every workstation regardless of how the workstation will be used. The COE kernel for the Windows NT environment includes the following component:

- C **COEInstaller runtime tool Version 1.0.0.10**—Used to support the segment installation process. The COEInstaller tool displays a list of segments that may be installed from floppy diskettes. The COEInstaller tool normally is executed by an operator who selects it from the DII Administrator program manager group.

The *DII COE Integration and Runtime Specification* and the *DII COE System Administrator's Guide (Windows NT)* provide a description of the COEInstaller tool and its functionality.

This version of the DII COE kernel is designed to run on the Windows NT Operating System Version 3.51, Service Pack 3 or later. Reference the *DII COE Windows NT Service Pack Installation Guide* for information on installing Windows NT Service Pack 3.

2. Referenced Documents

The following documents are referenced in this Version Description Document:

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification* Version 2.0, DII COE I&RTS: Rev 2.0, Inter-National Research Institute, October 23, 1995
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Kernel Installation Guide (Windows NT) FINAL* Version 3.0.0.4, DII.3004.Final.NT.IG-1, Inter-National Research Institute, November 1, 1996

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) System Administrator's Guide (Windows NT) FINAL* Version 3.0.0.4, DII.3004.NT.AG-1, Inter-National Research Institute, November 1, 1996
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Windows NT Service Pack Installation Guide (Windows NT 3.51, Service Pack 3) FINAL* Version 3.0.0.3, DII.3003.NT351.SP3.IG-1, Inter-National Research Institute, October 29, 1996.

3. Version Description

3.1 Inventory of Materials Released

- C Magnetic media: Two 3.5" floppy diskettes, each containing the DII COE kernel packaged in an InstallShield installer for Windows NT 3.51.
- C Soft-copy Documentation: One 3.5" floppy diskette (WordPerfect 6.0 for Windows format) containing the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version Description Document for the Kernel (Windows NT 3.51)* Version 3.0.0.5, Document Control No. DII.3005.NT.Kernel.VDD-1, December 20, 1996.
- C Hard-copy Documentation: Two hard copies of the aforementioned Version Description Document.

3.2 Software Changes

The COEInstaller is now backwards compatible with previous releases of the MakeInstall tool. Reference Attachment 1, *DII COE Kernel Version 3.0.0.5 (Windows NT 3.51) Software Changes*, for a list of software changes.

4. Installation Instructions

Reference the *DII COE Kernel Installation Guide (Windows NT)* and the *DII COE Windows NT Service Pack Installation Guide (Service Pack 3)* for instructions on installing the kernel and Windows NT Service Pack 3.

NOTE: Service Pack 3 must be installed before the DII COE kernel.
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5. Known Problems and Errors

Reference Attachment 2, *DII COE Kernel Version 3.0.0.5 (Windows NT 3.51) Known Problems and Errors*, for a list of Windows NT kernel software problems.

6. Release Notes

1. The DII COE kernel must be installed on the NTFS (NT File System). For this reason, the DOS file name limitations of an eight-character file name with a three-character extension (e.g., `FILENAME.EXT`) do not apply to COE files.
2. It is recommended that you close all other applications before running the COEInstaller. Doing so will prevent possible conflicts between running applications and the applications being installed.
3. Account groups are provided as Program Manager icon groups. For this reason, when an account group is installed, no new login or profile is created.
4. The COEInstaller now forces patches to be deinstalled in the correct order. Patch segments of a higher number must be deinstalled before patch segments of a lower number. However, if multiple patches are selected for removal at the same time, the COEInstaller may generate an error that states that the higher numbered patches must be deinstalled first. If this occurs, deinstall the patches one at a time in the correct order.
5. Some executables may cause resource contention problems when used during PostInstall processing. These resource contention problems occur when the PostInstall executable tries to use a resource that is locked by the COEInstaller. When this occurs, the PostInstall executable appears to suspend the installation. The deadlock can be resolved by closing the `cmd.exe` window that launched the PostInstall executable, which will allow the COEInstaller to finish processing so PostInstall can obtain the resources it needs. Note that this process may execute PostInstall out of the normal sequence of events, particularly if multiple segments are selected for installation; therefore, this process should be performed with caution.
6. This version of the COEInstaller can process media created by previous versions of the MakeInstall tool. This requires the COEInstaller to support both InstallShield-based MakeInstall media and non-InstallShield-based MakeInstall media. Because of this dual support, the user interface may appear to be different when extracting the two types of MakeInstall media. Despite these differences in appearance, the COEInstaller functionality remains the same.
7. Version 1.0.1.2 of the MakeInstall tool, which was released with DII COE Version 2.0.0.1, had a known problem with splitting some segments between disks. In some cases, the media created by Version 1.0.1.2 of MakeInstall could not be installed by the COEInstaller released with DII COE Version 2.0.0.1. This problem was resolved in Version 1.0.1.4 of MakeInstall. Because Version 1.0.1.2 of MakeInstall media was incorrect in some cases, some media created by the

Version 1.0.1.2 of MakeInstall will not be able to be installed on this release of the COEInstaller as well.

Attachment 1 - DII COE Kernel Version 3.0.0.5 (Windows NT 3.51) Software Changes

INRI Number Agency #	Short-Desc.	Long-Description
RTO00001275	NT COEInstaller backward compatibility problems.	The COEInstaller can not install segments that were created with the 2.0.0.1 and the 3.0.0.2/Beta MakeInstall.

Total Closed STRs: 1

Attachment 2 - DII COE Kernel Version 3.0.0.5 (Windows NT 3.51) Known Problems and Errors

INRI Number Agency #	Short-Desc.	Long-Description
RTO00001291	A specific segment converted 'JMPS' from UNIX to NT does not de-install properly.	A specific segment converted 'JMPS' from UNIX to NT does de-install properly. This aggregate segment consists of five child software segments. Actually the size of the aggregate in the "Currently Installed Segments" list states a -1. An existing STR of 822 states the deletion of an aggregate problem for NT.
RTO00001292	The NT COE Segment does not have a /h/COE/Comp directory.	The NT COE Segment does not have a /h/COE/Comp directory; where COE Component Segments are to be installed similar to the UNIX environment. Currently, the Installer will place the COEComponents under /h/Segments Functionality appears.

Total Open STRs: 2

Part 2. Version Description for the Developer's Toolkit (Windows NT 3.51) Version 3.0.0.5

NOTE: Courier font is used to indicate entries to be typed at the keyboard, Windows NT commands, file and directory names, and screen text. For example:

The file is located in the `DII_DEV` directory.

1. System Overview

Defense Information Infrastructure (DII) Common Operating Environment (COE) developer's tools were developed to aid the developer in the creation and ultimate installation of DII COE segments. The tools make software integration a largely automated process, thus significantly reducing development time while automatically allowing detection of potential integration and runtime problem areas.

This delivery consists of eight developer's tools for the Windows NT environment: CalcSpace, CanInstall, MakeInstall, TestInstall, TestRemove, TimeStamp, VerifySeg, and VerUpdate. All eight tools can be run from the command line; however, the MakeInstall tool also can be run using a graphical user interface (GUI). Each tool is described briefly below.

- C **CalcSpace Version 1.0.0.5**—the CalcSpace tool computes the space required for the segment specified and updates the hardware descriptor.
- C **CanInstall Version 1.0.0.7**—the CanInstall tool tests a segment to see if it can be installed, which means that all required segments must already be on the disk and the disk cannot have any conflicting segments.
- C **MakeInstall Version 1.0.1.6**—the MakeInstall tool writes one or more segments to an installation medium or packages the segments for distribution over the network.
- C **TestInstall Version 1.0.0.8**—the TestInstall tool temporarily installs a segment that already resides on disk.
- C **TestRemove Version 1.0.0.7**—the TestRemove tool removes a segment that was installed by the TestInstall tool.
- C **TimeStamp Version 1.0.0.7**—the TimeStamp tool puts the current time and date into the `VERSION` descriptor of the specified segment.
- C **VerifySeg Version 1.0.0.8**—the VerifySeg tool validates that a segment conforms to the rules for defining a segment.

- C **VerUpdate Version 1.0.1.6**—the VerUpdate tool increments the segment version number and updates the date and time in the `VERSION` descriptor of the specified segment.

The *DII COE Integration and Runtime Specification* provides a description of these tools and their functionality.

This version of the DII COE developer's toolkit is designed to run on the Windows NT Operating System Version 3.51, Service Pack 3 or later. Reference the *DII COE Windows NT Service Pack Installation Guide* for information on installing Windows NT Service Pack 3.

2. **Referenced Documents**

The following documents are referenced in this Version Description Document:

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 2.0*, DII COE I&RTS:Rev 2.0, Inter-National Research Institute, October 23, 1995
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Programming Guide (Windows NT) FINAL Version 3.0.0.5*, DII.3005.NT.PG-1, Inter-National Research Institute, October 29, 1996
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Windows NT Service Pack Installation Guide (Windows NT 3.51, Service Pack 3) FINAL*, DII.3003.NT351.SP3.IG-1, Inter-National Research Institute, October 29, 1996.

3. **Version Description**

3.1 **Inventory of Materials Released**

- C Magnetic media: Two copies of two 3.5" floppy diskettes containing the executable files for the Windows NT CalcSpace, CanInstall, MakeInstall, TestInstall, TestRemove, TimeStamp, VerifySeg, and VerUpdate tools. These diskettes also contain the include files, libraries, and example source files for the public Application Programmer Interfaces (APIs).
- C Soft-copy Documentation: One 3.5" floppy diskette (WordPerfect 6.0 for Windows format) containing the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version Description Document for the Developer's Toolkit (Windows NT 3.51)* Version 3.0.0.5, Document Control No. DII.3005.NT.DTK.VDD-1, December 20, 1996.

- C Hard-copy Documentation: Two hard copies of the aforementioned Version Description Document.

3.2 **Software Changes**

No functional software changes were made as a part of this build.

4. **Installation Instructions**

Reference the *DII COE Programming Guide (Windows NT)* for instructions on installing the developer's tools.

5. **Known Problems and Errors**

Reference Attachment 1, *DII COE Developer's Toolkit Version 3.0.0.5 (Windows NT 3.51) Known Problems and Errors*, for a list of software problems.

6. **Release Notes**

General

1. During tool execution, some filenames are displayed with incorrect path separator characters [i.e., a forward slash (/) instead of a backward slash (\)]. This does not affect segment operation.
2. Some executables may cause resource contention problems when used during PostInstall processing. These resource contention problems occur when the PostInstall executable tries to use a resource that is locked by the COEInstaller. When this occurs, PostInstall appears to suspend the installation. Developers should avoid using a PostInstall executable that creates this problem. If this cannot be avoided, the developer can create a PostInstall executable that launches the program using a Windows API function, such as `CreateProcess`, which starts a process without waiting for it to return. This will allow the COEInstaller to continue processing before PostInstall is complete. This will execute the PostInstall out of the normal sequence of events, and should be used with caution.

MakeInstall Tool

1. The combined size of the `SegDescrip` directories for MakeInstall disk sets must be less than 1.44MB.
2. MakeInstall does not support variants.

3. MakeInstall does not allow segments and their descriptors to be checked out from the repository.
4. MakeInstall does not support the `-ot {files}` command line option.
5. In order not to compress a segment, the `$NOCOMPRESS` option must be specified in the direct `SegDescrip` entry in the `SegInfo` file. MakeInstall no longer prompts the user with a compress option; instead, the tool automatically references the `SegDescrip` entry.
6. When running MakeInstall, the first window that requests header information (e.g., name, serial, comment) may not be brought to the foreground if other application windows are open; as a result, the user may have to close or iconify other open application windows to bring the header window into view.

TestInstall Tool

1. When running the TestInstall tool, the `Program Manager` window may appear on top of the TestInstall window when adding icons. This does not indicate completion of the installation: the user must select the `TestInstall` window to view the rest of the installation.
2. The `AcctGrp` descriptor only supports one entry. If multiple entries exist, only the first account group is created.

TestRemove Tool

1. TestRemove does not remove services, groups, or password file entries.

TimeStamp Tool

1. If a valid version line cannot be identified and no command line parameters are given, the TimeStamp tool will return an error.

VerifySeg Tool

1. The `-f` option has not been implemented for VerifySeg.
2. The VerifySeg tool cannot be run against a segment on a write-protected diskette because it needs to update the validated file within `SegDescrip`.
3. VerifySeg does not check the syntax of version numbers listed in the `Compat Segment Descriptor` file.

4. VerifySeg performs keyword parsing (searches for keywords and their associated fields) but does not perform validity (bounds or data field) checking in the `Conflicts` or `VERSION` descriptor file.
5. VerifySeg does not perform checking in the `FilesList` Segment Descriptor file.
6. VerifySeg performs validity checking (bounds or data field) on keywords but not on data associated with keywords (e.g., disk size in the `Hardware` Segment Descriptor file).
7. VerifySeg does not check keyword combination or keyword and segment type constraints in the `Hardware` Segment Descriptor file.

VerUpdate Tool

1. If a valid version line in the version file cannot be identified and no command line parameters are given, the VerUpdate tool will return an error.

Attachment 1 - DII COE Developer's Toolkit Version 3.0.0.5 (Windows NT 3.51) Known Problems and Errors

INRI Number Agency #	Short Desc.	Long-Description
RTO00001160	VerifySeg should warn that no automated checking of FilesList or Compat descriptor is done.	VerifySeg should warn that no automated checking of FilesList or Compat descriptor is done.
RTO00001290	The SysAdm segment for the NT kernel does not have an [Icons] or [Menus] entry in the file.	The SysAdm segment for the NT kernel does not have an [Icons] or [Menus] entry in the 'SegInfo' file. A segment was converted from UNIX to NT. This particular segment had a [Menu] entry which modified the 'SysAdm' account group. If all functionality is to be cross compatible for all platforms, the segment should install.
RTO00001316	TestRemove (NT) does not perform dependency checking when deinstalling multiple Patch segments.	TestRemove (NT) does not perform dependency checking when de-installing multiple Patch segments. The tool allows patches to be removed even though there is a valid [Requires] and \$SEGMENT entry found in their "SegInfo" and "SegName" files respectively. If the Installer tries to de-install the same segment it will perform dependency checking and error when there is an improper deletion of a patch (out of numerical sequence, etc.) Comment about the problem: In the above scenario an account group was created and several patches were installed to modify the account group. When the patches were installed there was not a "Patches" directory created under the installed account group segment. Once the patches were 'TestRemoved' their Registry entries were deleted (that's OK) but the associated dependency with the account group was not checked or even noted in a common directory structure similar to the UNIX implementation of account groups and patches.

Total Open STRs: 3

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Part 3. Version Description for the MS Office Version 1.0.0.0/4.2c (MS-Windows NT 3.51)

1. System Overview

MS-Office 4.2c is a COTS product that is designed to operate on a Windows 3.x, Windows 95 or Windows NT platform. This application is designed to manage the MS-Office suite of office automation tools such as MS-Excel, MS-PowerPoint and MS-Word. The application is represented as a customizable floating toolbar that usually appears in the upper right corner of the screen. Although its main purpose is to manage MS-Office products, the MS-Office application (toolbar) is easily configurable allowing users to add other Windows applications like Program Manager, File Manager, Write, etc. to the MS-Office toolbar. The MS-Office 4.2c segment itself takes approximately 1 Mb of disk space and uses less than 2 Mb of RAM.

2. Version Description

2.1 Inventory of Materials Released

- C Magnetic media: Two 3.5" HD diskettes each consisting of the MS-Office 4.2c application software in "MakeInstall" format, Version 1.0.0.0/4.2c (Windows NT 3.51).

3. Installation Instructions

Reference the Installation letter for the MS-Office 4.2c application that is delivered with MS-Office 1.0.0.0/4.2c.

4. Known Problems and Errors

There are no known problems with this segment.

5. Release Notes

The Release Notes delivered with the MS-Office 4.2c segment is contained in the "SegDescrip" directory. The file containing the Release Notes documentation is called "ReleaseNotes."

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